CLAIMS

Please amend the claims as follows:

1. (Original) A nutating single cone drill bit comprising:

a bit shank to connect to a drill string and providing an eccentric, skewed threaded bore;

a threaded journal for engagement in the eccentric, skewed threaded bore of the bit shank;

a cutter body rotatably carried on said journal;

a plurality of cutter elements affixed to an exterior peripheral side of said cutter body so that a tip of each cutter element is forward an intersection of a central axis of the drill bit body and an axis of rotation of the cutter body and a first chordal distance to the tip of each cutter element from an axis of cutter rotation is longer than a second chordal distance to said tip of each cutter element from an axis of the bit body rotation.

2. (Original) The nutating single cone drill bit of claim 1 further comprising a jetting passage from an interior passage of said drill bit to an exterior of said bit adjacent the cutter body to permit hydraulic communication from the interior to the exterior of the drill bit to carry cuttings from a bore.

3. (Original) The nutating single cone drill bit of claim 1 further comprising pressure-compensated lubrication fitting in said journal body.

4. (Original) The nutating single cone drill bit of claim 1 further comprising a thrust bearing between a exterior surface of the journal and an interior surface of the cutter body.

5. (Original) The nutating single cone drill bit of claim 1 further comprising a plurality of bearings in a bearing race formed in a groove on the exterior lateral surface of the journal, retained therein by an interior lateral surface of the cutter body.

6. (Original) The nutating single cone drill bit of claim 1 further comprising a plurality of bearings retained in a bearing race formed on an exterior lateral surface of the journal and an interior lateral interior surface of the cutter body.

7. (Original) The nutating single cone drill bit of claim 1 further comprising a breaker slot on an exterior surface of the bit shank.

8. (Original) The nutating single cone drill bit of claim 1 wherein the skew angle of the journal is about 10° from the longitudinal axis of drill bit shank.

9. (Original) The nutating single cone drill bit of claim 1 wherein the exterior lateral surface of the cutter body provides a plurality of junk slots to permit cuttings to move past the cutter body in a bore.

10. (Presently Amended) A single-cone cutter shell comprising:

a hemispheric body having a interior surface to support a plurality of bearings on a journal having a rotational axis skewed to a central axis of a drill string; and,

a plurality of cutter elements disposed on an outer surface of said hemispheric body arranged so that a tip of each said ~~tip~~ cutter element lies forward a ~~perpendicular~~ plane perpendicular to a rotational axis of the hemispheric body and said plane passing through an intersection between the rotational axis and the central axis; and

each said tip is farther from the rotational axis of the hemispheric body than from the central axis of the drill string.

11. (Original) The single-cone cutter shell of claim 10 wherein each such cutter element is conical.

12. (Original) The single-cone cutter shell of claim 10 wherein each such cutter element is chisel pointed.

13. (Original) The single-cone cutter shell of claim 10 wherein the cutter elements are conical and chisel pointed, with said chisel pointed cutter elements positioned on at least a portion of said outer peripheral edge of said cutter shell.

14. (Original) A single cone rotary drill bit comprising:

a bit shank configured to connect to a drill string, said bit shank defining a bit axis and including a receptacle bore;

a journal to be engaged within said receptacle bore, said journal configured to retain a cutter body thereupon, said cutter body defining a rotation axis;

said rotation axis skewed from said bit axis by a skew angle; and

a plurality of cutter elements mounted upon said cutter body, said cutter elements configured so that a tip of each cutter element is forward a plane defined normal to said cutter axis at an intersection of said cutter axis and said bit axis.

15. (Original) The single cone rotary drill bit of claim 14 wherein:

said tips of said cutter elements each include a first chordal distance from said rotation axis and a second chordal distance from said bit axis; and

said first chordal distance is longer than said second chordal distance for each cutter element.

16. (Original) The single cone rotary drill bit of claim 14 further comprising a thrust bearing positioned between said cutter body and said journal.

17. (Original) The single cone rotary drill bit of claim 14 further comprising a rotational bearing between said cutter body and said journal.

18. (Original) The single cone rotary drill bit of claim 14 wherein said skew angle is 10 degrees.

19. (Original) A drill bit comprising:

a connection to a drillstring, said drillstring defining a drillstring axis;

a cutter body, said cutter body defining a rotational axis wherein said rotational axis is skewed from said drillstring axis by a skew angle; and

a plurality of cutter elements dispersed about said cutter body, each cutter element having a tip, wherein each tip is forward a plane defined normal to said rotational axis at the intersection of said rotational axis and said drillstring axis.

20. (Original) The drill bit of claim 19 further wherein said tips of said cutter elements each have a first chordal distance from said rotational axis and a second chordal distance from said drillstring axis, wherein said first chordal distance is longer than said second chordal distance.

21. (Original) A method to drill a formation, the method comprising:

attaching a single cone drill bit to a drillstring, the single cone drill bit configured such that a cutter body of the single cone drill bit includes a plurality of cutter elements, each cutter element having a tip forward a plane defined by about an axis of rotation of the cutter body at an intersection of the axis of rotation with an axis of rotation of the drillstring;

engaging the drillstring with attached single cone drill bit into a bore; and

rotating the drillstring to drill the formation with the single cone drill bit, wherein the cutter body rotates slower than the rotation of the drillstring and the cutter elements crush the formation coming into contact therewith.

22. (Original) The method of claim 19 wherein the tips of the cutter elements each include a first chordal distance from the cutter axis and a second chordal axis from the drillstring axis, wherein the first chordal distance is longer than the second chordal distance for each cutter element.